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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/712,542

11/14/2000

Louis R. Degenaro

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10/21/2003

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EXAMINER

BANANKHAH, MAJID A

ART UNIT	PAPER NUMBER
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2127

DATE MAILED: 10/21/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/712,542

Applicant(s)

DEGENARO ET AL.

Examiner

Majid A Banankhah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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1. This office action is in response to application filed on November 14, 2000, Claims 1-23 are considered for examination.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gopal et al. (U.S. Pat. No. 5,491,817, hereinafter Gopal).

Per claims 1, 11, 16-17, 18 and 20, Gopal teaches: In a system comprised of a plurality of objects (col. 5, lines 34-43, multiple objects), wherein each object has a key associated therewith (col. 6, lines 26-33, linking object as a key) and is capable of having different values for at least two of a plurality of different contexts (col. 6, lines 39-44, users can access information about an object in one context by knowing information about the object in another context), a method for caching at least some of the plurality of objects, comprising the steps of:

maintaining a cache directory structure in which at least two different values are capable of being associated with at least one of the plurality of objects (, each of the at least two different values corresponding to a different context (col. 6, lines 54-58, the unique linking identifier of an object serves as a link among many directories, thereby limiting or reducing the need to store the same information in many directories, and same col., lines 39-44, users can access information about an object in one context by knowing information about the object in another context);

identifying an object to be cached from among the plurality of objects and a context from among the plurality of different contexts (col. 6, lines 14-18, the credit bureau linking application then launches a second query ...);

and storing the identified object in the at least one cache based upon the key associated therewith and the identified context (col. 8, lines 11-14, the linking directory 300 is a data base comprising memory of storing directory entries).

While the reference of Gopal teaches of storing directory entries on a memory, he fails to explicitly teach of at least one cache and storing the identified object in the at least one cache. However, it using cache is commonly known in the art at the time the invention was made because cache is a special high speed storage mechanism, which can be either a reserved section of main memory or an independent high speed storage device

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to use the same data over and over. Therefore, it would have been obvious for one ordinary skill in the art at the time the invention was made to use a part of the main memory as cache to use frequently used data over and over.

Regarding the one dependency between the at least one object and underlying data, and identical dependency, Gopal teaches of these limitations in col. 8, lines 46-57.

Per claim 2, the method according to claim 1, wherein the at least one cache maintains at least a portion of a data structure for storing multiple versions of the identified object and said storing step further comprises the step of identifying the at least a portion of the data structure from the key associated with the identified object (see Gopal, col. 8, lines 23-45, single query processor).

Per claim 3, the method according to claim 1, wherein said storing step further comprises the steps of: generating a composite index from the key associated with the identified object and the identified context; and storing the identified object based upon the composite index (see Gopal, col. 6, lines 55-58, and lines 59-63, and linking directory).

Per claim 4, the method according to claim 1, further comprising the step of looking up a given object from among the plurality of objects based upon a key associated with the given object and one of the plurality of different contexts (Gopal, col. 7, lines 44-53, and linking component).

Per claim 5, the method according to claim 1, further comprising the step of deleting a cached object based upon a key associated with the cached object and one of the plurality of different contexts.

Per claim 6, the method according to claim 1, further comprising the steps of: maintaining a data structure that includes at least one key associated with at least one given object from among the plurality of objects, the at least one given object being cached within one of the plurality of different contexts (col. 6, lines 39-43); and deleting the at least given object by identifying the at least one object in the data structure based upon the at least one key associated therewith (col. 9, lines 35-38).

Per claim 7, the method according to claim 1, further comprising the step of copying at least one given object from among the plurality of objects that is cached under one of the plurality of contexts to another one of the plurality of contexts.

Per claim 8, the method according to claim 1, wherein the plurality of different contexts represent transactional contexts (col. 9, lines 50-52).

Per claim 9, the method according to claim 1, wherein cached objects represent query results (col. 10, lines 52-58, query and local directories).

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Per claim 10, identifying the at least one of the plurality of values for the at least one object within a context from among the plurality of contexts; and propagating the at least one of the plurality of values to at least one other context from among the plurality of contexts, wherein the at least one object has identical dependencies in the context and the at least one other context (col. 9, lines 50-53, mapping between ... in different context).

Per claims 12-13, the method according to claim 11, wherein the underlying data is dependent underlying data, and at least some of the plurality of values are derived from the dependent underlying data (col. 10, lines 52-68, Linking applications having access to other linking directories containing linking references with further points to such local directories).

Per claims 14-15, the method according to claim 11, wherein the plurality of different contexts are transactional contexts (col. 3, lines 19-24, ABC bank transaction).

Per claim 18, the method according to claim 17, wherein the plurality of contexts are transactional contexts and said realizing step comprises the step of committing the context as a transactional context (col. 6, lines 14-25).

Per claim 21-23, the system according to claim 20, wherein said context manager is a transaction manager, wherein said context manager is a transaction manager adapted to support lock-based, pessimistic concurrency control, wherein said context manager is a transaction manager adapted to support optimistic concurrency control (col. 6, lines 14-21, lines 26-33).

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Majid A. Banankhah** whose voice telephone number is (703) 308-6903. A voice mail service is also available at this number.

All response sent to U.S. Mail should be mailed to:

**Commissioner of Patent and Trademarks
Washington, D.C. 20231**

Hand-delivered responses should be brought to Crystal Park Two, 2021 Crystal Drive, Arlington, VA, Six Floor (Receptionist). All hand-delivered responses will be handled and entered by the docketing personnel. Please do not hand deliver responses to the Examiner.

All Formal or Official Faxes must be signed and sent to either (703) 308-9051 or (703) 308-9052. Official faxes will be handled and entered by the docketing personnel. The date of entry will correspond to the actual FAX reception date unless that date is a Saturday, Sunday, or a Federal Holiday within the District of Columbia, in

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which case the official date of receipt will be the next business day. The application file will be promptly forwarded to the Examiner unless the application file must be sent to another area of the office, e.g., Finance Division for fee charging, etc.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Maid Banankhah

10/20/2003


MAJD BANANKHAH
PRIMARY EXAMINER